

In Brief...

Proposed Geothermal Developments at Medicine Lake Highlands

Prepared by:
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INTRODUCTION

In 1996 and 1997, the Bureau of Land Management (BLM) and the Forest Service received two separate proposals from current federal geothermal lease holders to construct, operate and maintain geothermal power plants in the Medicine Lake Highlands' Glass Mountain Known Geothermal Resource Area (KGRA). Each plant would use geothermal steam to produce about 49 megawatts of electricity. The KGRA is located within the Modoc, Klamath and Shasta-Trinity national forests in northeast California. The BLM and Forest Service, along with Bonneville Power Administration (BPA) and the Siskiyou County Air Pollution Control District, oversaw preparation of an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for each proposal. The proposed projects are within six miles of one another. Decisions approving the power plant proposal at Fourmile Hill and denying the proposal at Telephone Flat were announced May 31, 2000.

THE DECISIONS:

The environmental analysis, consisting of a federal environmental impact statement, or EIS, and state environmental impact report, or EIR, was conducted independently for each project. Each proposal was evaluated on its own merits. Each project had a unique set of environmental concerns, which led to the project-specific decisions by the agencies.

The BLM was responsible for decisions affecting development of the geothermal leases themselves. The two national forests were responsible for decisions regarding activities on lands within the Modoc National Forest and Klamath National Forest, such as roads and power lines.

The decisions were made after lengthy and thorough analysis and public input. The agencies received and analyzed nearly 2,000 public comments.

Agency officials held more than 30 meetings over four years with tribal governments, following well established government-to-government protocols and federal regulations.

Fourmile Hill: In the Record of Decision, the BLM and Forest Service identified rationale for approval of this power plant proposal:

- The project is outside the Medicine Lake volcanic caldera (an extinct volcano crater) which makes it easier to minimize noise and impacts to Medicine Lake visitors and homeowners, and the American Indian tribes who use the area for traditional and spiritual practices.
- While there will be impacts to American Indian traditional cultural uses and values in the area, some impacts can be mitigated.
- The project would not impact the Lava, Mt. Hoffman and Dobie Flat roadless areas on the Modoc National Forest.
- The project is consistent with the land and resource management plans for the Modoc and Klamath national forests.
- The project is consistent with BLM policies for renewable energy development.

Approval of the project included two special provisions:

- Establishment of a citizen oversight panel to oversee the project and the company's compliance with environmental protection provisions.
- A five-year moratorium on further development of the of the Fourmile Hill geothermal lease pending analysis of geothermal development impacts.

Telephone Flat: In the Record of Decision, the agencies noted the following rationale for denial of the project:

- The plant site is within the Medicine Lake volcanic caldera. Recreation use of this area has increased significantly since the geothermal leases were issued in 1982.
- The noise and visual appearance of the power plant would have significant impacts on recreation users. These impacts cannot be reduced to an acceptable level.

- Construction of the project would impact a Modoc National Forest late successional timber reserve managed for sensitive wildlife species. The impacts cannot be mitigated.
- The project is not consistent with the Modoc National Forest Plan provisions that call for protection of heritage resources.
- Construction would impact the Mt. Hoffman Roadless Area, and the impacts cannot be mitigated.
- The American Indian traditional cultural values that make the area eligible for listing in the National Register of Historic Places would be adversely affected. Consultations with the tribal governments, traditional practitioners, the state historic preservation officer and the National Advisory Council on Historic Preservation indicated these effects could not be reduced to acceptable levels.

KEY ISSUES

People have expressed concerns about geothermal development in the Medicine Lake area for several reasons. The area is considered by American Indians to have significant spiritual and cultural values. The Pit River Nation and the Klamath tribes have expressed concern that the construction of the power plants and related facilities would be incompatible with use of the area for traditional spiritual purposes.

Other groups have voiced concerns that developments would be incompatible with recreation uses, both summer and winter. Still other comments expressed concern about impacts on ground water quality and quantity and possible harmful effects on domestic water supplies. In response to comments by the U. S. Environmental Protection Agency, the U. S. Geological Survey was asked to conduct testing to determine the relationship between the geothermal resource and groundwater. Results were reviewed with EPA and considered in the BLM and FS decisions on the projects.

There has also been support for the projects because geothermally-produced electricity is considered to be more environmentally friendly than other generating methods such as fossil fuels and nuclear power.

BACKGROUND

In 1981 and 1984, the BLM, in partnership with the Forest Service, issued federal geothermal leases within the Medicine Lake KGRA. Prior to the issuance of these leases, both federal agencies participated in preparing appropriate environmental documents in accordance with the National Environmental Policy Act (NEPA).

Between 1984 and 1991 Phillips, UNOCAL, and other companies which had competitively bid for the federal leases began geothermal exploration. The work identified a potential geothermal resource in the Medicine Lake Highlands. However, the companies chose not to proceed with development, apparently because of the high cost of geothermal development compared with natural gas and hydro-electric development and production.

In the early 1990s, Bonneville Power Administration expressed interest in geothermal energy as part of its energy portfolio. Industry surveys indicated a growing public willingness to pay higher prices for geothermal electricity. The two proponents then submitted proposals to the BLM and Forest Service to develop geothermal power on their leases.

BLM AND FOREST SERVICE ROLE

The BLM is the lead federal agency for approval of geothermal operations on the leases. The Forest Service provides recommendations to BLM about leases on national forest lands. The Forest Service has lead approval for activities on national forests, including access roads and transmission lines.

Both agencies have a national energy policy to promote environmentally sound energy development. The Modoc National Forest Plan allowed for geothermal development in the Medicine Lake area.

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